

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 38

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte TAKAYUKI SHIMADA,
TOSHIHIRO YAMASHITA,
and YUTAKA TAKAFUJI

Appeal No. 1997-0627
Application 08/266,159¹

HEARD: November 16, 1999

Before HAIRSTON, JERRY SMITH and FRAHM, Administrative Patent Judges.

HAIRSTON, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 1, 3 through 6, 8 through 10 and 13 through

¹ Application for patent filed June 27, 1994. According to appellants this application is a continuation of Application 08/009,115, filed January 26, 1993, now abandoned.

17.

The disclosed invention relates to an active matrix display device, and to a method of driving the display device.

Claim 1 is illustrative of the claimed invention, and it reads as follows:

1. An active matrix display device comprising:

a plurality of pixels arranged two-dimensionally in columns and rows,

a plurality of driving elements wherein a driving element is provided for each pixel to drive the pixel, and wherein a group of signal lines for feeding signals to the driving elements are provided for each column of pixels and each driving element of a column is connected to a selected one of said group, so that the driving elements of each adjacent pixel in a column are driven by a different selected one of the signal lines from said group of signal lines and the driving elements provided for each row of pixels are connected to the same selected one in each group of signal lines provided for each column of pixels,

a plurality of gating signal lines wherein each of the gating signal lines is connected to the driving elements of a single row of pixels so that each gating signal line provides an ON state gating signal to the driving elements of a different respective row of pixels, and

wherein the time necessary to feed the signals from said group of signal lines for each column to each driving element of a row of pixels is substantially less than an ON state gating signal time of said row of pixels.

The references relied on by the examiner are:

Inoue et al. (Inoue)	4,724,433	Feb. 9, 1988
Maekawa et al. (Maekawa) ²	2-252378	Oct. 11, 1990

² This reference was incorrectly identified as Toshichi throughout the prosecution of this case.

(Japanese unexamined patent publication)

Claims 1, 3, 4, 13 and 14 stand rejected under 35 U.S.C. § 103 as being unpatentable over Maekawa.

Claims 5, 6, 8, 10 and 15 through 17 stand rejected under 35 U.S.C. § 103 as being unpatentable over Maekawa in view of the admitted prior art of Figures 1 through 3.

Claim 9 stands rejected under 35 U.S.C. § 103 as being unpatentable over Maekawa in view of the admitted prior art and Inoue.

Reference is made to the briefs and the answer for the respective positions of the appellants and the examiner.

Although each of Figures 1, 3 and 8 of Maekawa discloses “a group of signal lines for feeding signals to the driving elements . . . for each column of pixels and each driving element of a column is connected to a selected one of said group, so that the driving elements of each adjacent pixel in a column are driven by a different selected one of the signal lines from said group of signal lines,” the examiner acknowledges (Answer, page 3) that “Figs. 1, 3 and 8 of Toshichi [sic, Maekawa] does [sic, do] not disclose each of the gating signal lines is connected to the driving elements of a single row of pixels.” The examiner turns to Figure 6 of Maekawa which teaches that each gating signal line is connected to the driving elements of a single row of pixels. Notwithstanding the lack of a teaching in Figure 6 of Maekawa of a group of signal lines feeding signals to the driving elements in each column of

pixels, the examiner is of the opinion (Answer, pages 3 and 4) that “it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify each of the gating signal lines in Figs. 1, 3 and 8 of Toshichi [sic, Maekawa] to be connected to the driving elements of a single row of pixels so as to control the each row of pixels individually.”

We agree with appellants’ arguments (Brief, pages 13 and 14) that “two rows of pixels have to be scanned simultaneously” in Maekawa, and that “data for two rows of pixels is necessary at the same time.” Thus, the modification proposed by the examiner would defeat the whole purpose of the circuits of Figures 1, 3 and 8 of Maekawa.

The 35 U.S.C. § 103 rejection of claims 1, 3, 4, 13 and 14 is reversed because the examiner has resorted to impermissible hindsight to demonstrate the obviousness of the claimed invention (Brief, page 18).

Turning to independent claim 6, appellants’ admitted prior art was only relied on to show the timing of signals to the driving elements. Since the admitted prior art does not cure the noted shortcoming in the teachings of Maekawa, we will reverse the 35 U.S.C. § 103 rejection of claims 5, 6, 8, 10 and 15 through 17.

The 35 U.S.C. § 103 rejection of claim 9 is likewise reversed because the switching pulse teachings of Inoue likewise do not cure the noted shortcoming in the teachings of Maekawa.

Appeal No. 1997-0627
Application 08/266,159

DECISION

The decision of the examiner rejecting claims 1, 3 through 6, 8 through 10 and 13 through 17 under 35 U.S.C. § 103 is reversed.

REVERSED

KENNETH W. HAIRSTON)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
JERRY SMITH)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
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ERIC FRAHM)	
Administrative Patent Judge)	

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